

## WHAT IS CLAIMED IS

1. A method for handling events in a distributed computing environment,  
5 comprising:

receiving a message in a data representation language sent to a client platform in  
the distributed computing environment from a service in the distributed  
computing environment, wherein the message includes a data  
10 representation language representation of an event generated by the  
service; and

sending the data representation language representation of the event to one or  
more processes registered to receive the event from the service.

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2. The method as recited in claim 1, further comprising:

receiving a data representation language schema on the client platform, wherein  
said data representation language schema defines a message interface for a  
20 set of events generated by the service; and

generating an event message endpoint for the client platform according to the data  
representation language schema, wherein said receiving a message and  
said sending the data representation language representation of the event to  
one or more processes are performed by the event message endpoint.

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3. The method as recited in claim 2, further comprising the event message endpoint  
subscribing to one or more of the set of events generated by the service, wherein the  
service is configured to send messages including data representation language  
30 representations of an event to subscribers to the event when the event is generated.

4. The method as recited in claim 2, wherein the data representation language message from the service includes an authentication credential for the service, the method further comprising the event message endpoint using the authentication credential for the service to authenticate the data representation language message as being from the service.
5. The method as recited in claim 2, further comprising the event message endpoint verifying type correctness of the data representation language message according to the data representation language schema subsequent to said receiving a message.
6. The method as recited in claim 2, wherein the data representation language schema defines a set of messages that the service may send to the event message endpoint, the method further comprising the event message endpoint verifying the correctness of the data representation language message from the service according to the data representation language schema.
7. The method as recited in claim 2, further comprising each of the one or more processes registering interest in one or more of the set of events generated by the service with the event message endpoint subsequent to said generating an event message endpoint.
8. The method as recited in claim 7,  
25 wherein said registering interest in one or more of the set of events comprises each of the one or more processes providing an event handler callback method to the event message endpoint;

wherein said sending the data representation language representation of the event to one or more processes registered to receive the event from the service comprises:

5           the event message endpoint calling an event handler method of each process registered with the event message endpoint to the event; and

10           the event message endpoint passing the data representation language representation of the event to each called event handler.

9.       The method as recited in claim 7, further comprising:

15           a process unregistering interest in a first event of the service; and

the event message gate unsubscribing to the first event with the service subsequent to said unregistering;

20           wherein the service is further configured to not send messages including data representation language representations of the first event to event message endpoints that are unsubscribed to the first event.

10.      The method as recited in claim 2, further comprising receiving the data representation language schema of the service in a service advertisement of the service.

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11.      The method as recited in claim 1, wherein the one or more processes are executing within the client platform.

12.      The method as recited in claim 1, wherein the event is a Java event.

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13. The method as recited in claim 1, wherein said data representation language is eXtensible Markup Language (XML).

5 14. A device, comprising:

a processor;

a memory coupled to said processor;

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an event message gate unit configured to:

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receive a message in a data representation language sent to the device in the distributed computing environment from a service in the distributed computing environment, wherein the message includes a data representation language representation of an event generated by the service; and

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send the data representation language representation of the event to one or more processes registered to receive the event from the service.

15. The device as recited in claim 14, wherein the device is configured to:

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receive a data representation language schema, wherein said data representation language schema defines a message interface for a set of events generated by the service; and

generate the event message gate unit according to the data representation language schema.

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16. The device as recited in claim 15, wherein the event message gate unit is further configured to verify type correctness of the data representation language message according to the data representation language schema subsequent to said receiving a message.

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17. The device as recited in claim 15, wherein the data representation language schema defines a set of messages that the service may send to the event message gate unit, and wherein the event message gate unit is further configured to verify the correctness of the data representation language message from the service according to the  
10 data representation language schema.

18. The device as recited in claim 15, wherein the device is further configured to receive the data representation language schema of the service in a service advertisement of the service.

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19. The device as recited in claim 14, wherein the event message gate unit is further configured to subscribe to one or more of the set of events generated by the service, and wherein the service is configured to send messages including data representation language representations of an event to subscribers to the event when the event is  
20 generated.

20. The device as recited in claim 14, wherein the data representation language message from the service includes an authentication credential for the service, wherein the event message gate unit is further configured to use the authentication credential for the service to authenticate the data representation language message as being from the service.  
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21. The device as recited in claim 14, wherein each of the one or more processes are configured to register interest in one or more of the set of events generated by the service

with the event message gate unit subsequent to said generating an event message gate unit.

22. The device as recited in claim 21,

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wherein, in said registering interest in one or more of the set of events, each of the one or more processes is configured to provide an event handler callback method to the event message gate unit;

10 wherein, in said sending the data representation language representation of the event to one or more processes registered to receive the event from the service, the event message gate unit is further configured to:

15 call an event handler method of each process registered with the event message gate unit to the event; and

pass the data representation language representation of the event to each called event handler.

20 23. The device as recited in claim 21,

wherein a first process is configured to unregister interest in a first event of the service;

25 wherein the event message gate is further configured to unsubscribe to the first event with the service subsequent to said unregistering; and

30 wherein the service is configured to not send messages including data representation language representations of the first event to event message gate units that are unsubscribed to the first event.

24. The device as recited in claim 14, wherein the one or more processes are executing within the client platform.

5 25. The device as recited in claim 14, wherein the event is a Java event.

26. The device as recited in claim 14, wherein said data representation language is eXtensible Markup Language (XML).

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27. A device, comprising:

a processor;

15 a memory coupled to said processor;

a service process configured to:

generate an event;

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generate a message in a data representation language, wherein the message includes a data representation language representation of the event generated by the service process; and

25 send the message to one or more event message gate units in the distributed computing environment;

wherein each of the one or more event message gate units are operable to distribute the data representation language representation of the event sent in the message from the service process to one or more processes

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registered to receive the event from the service process.

28. The device as recited in claim 27, wherein the device further comprises a service message gate unit, wherein said generating a message and said sending the message are 5 performed by the service message gate unit on behalf of the service process.
29. The device as recited in claim 27, wherein the service process is further configured to:
  - 10 provide a data representation language schema, wherein said data representation language schema defines a message interface for a set of events generated by the service; and
  - 15 wherein the one or more event message gate units are generated according to the data representation language schema.
30. The device as recited in claim 29, wherein the data representation language schema defines a set of messages that the service may send to the event message gate units.
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31. The device as recited in claim 29, wherein the service process is further configured to provide the data representation language schema in a service advertisement.
32. The device as recited in claim 27, wherein the service process is further 25 configured to send messages including data representation language representations of an event to event message gate units subscribed to the event when the event is generated by the service process.
33. The device as recited in claim 27, wherein the service process is further 30 configured to attach an authentication credential for the service to the data representation

language message, wherein the authentication credential is configured for use in authenticating the data representation language message as being from the service process.

5     34.    The device as recited in claim 27, wherein the events are Java events.

35.    The device as recited in claim 27, wherein said data representation language is eXtensible Markup Language (XML).

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36.    A carrier medium comprising program instructions, wherein the program instructions are computer-executable to implement:

15           receiving a message in a data representation language sent to a client platform in the distributed computing environment from a service in the distributed computing environment, wherein the message includes a data representation language representation of an event generated by the service; and

20           sending the data representation language representation of the event to one or more processes registered to receive the event from the service.

37.    The carrier medium as recited in claim 36, wherein the program instructions are further computer-executable to implement:

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              receiving a data representation language schema on the client platform, wherein said data representation language schema defines a message interface for a set of events generated by the service; and

generating an event message endpoint for the client platform according to the data representation language schema, wherein said receiving a message and said sending the data representation language representation of the event to one or more processes are performed by the event message endpoint.

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38. The carrier medium as recited in claim 37, wherein the program instructions are further computer-executable to implement the event message endpoint subscribing to one or more of the set of events generated by the service, wherein the service is configured to send messages including data representation language representations of an event to subscribers to the event when the event is generated.

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39. The carrier medium as recited in claim 37, wherein the data representation language message from the service includes an authentication credential for the service, wherein the program instructions are further computer-executable to implement the event message endpoint using the authentication credential for the service to authenticate the data representation language message as being from the service.

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40. The carrier medium as recited in claim 37, wherein the program instructions are further computer-executable to implement the event message endpoint verifying type correctness of the data representation language message according to the data representation language schema subsequent to said receiving a message.

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41. The carrier medium as recited in claim 37, wherein the data representation language schema defines a set of messages that the service may send to the event message endpoint, wherein the program instructions are further computer-executable to implement the event message endpoint verifying the correctness of the data representation language message from the service according to the data representation language schema.

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42. The carrier medium as recited in claim 37, wherein the program instructions are further computer-executable to implement each of the one or more processes registering

interest in one or more of the set of events generated by the service with the event message endpoint subsequent to said generating an event message endpoint.

43. The carrier medium as recited in claim 42,

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wherein, in said registering interest in one or more of the set of events, the program instructions are further computer-executable to implement each of the one or more processes providing an event handler callback method to the event message endpoint;

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wherein, in said sending the data representation language representation of the event to one or more processes registered to receive the event from the service, the program instructions are further computer-executable to implement:

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the event message endpoint calling an event handler method of each process registered with the event message endpoint to the event; and

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the event message endpoint passing the data representation language representation of the event to each called event handler.

44. The carrier medium as recited in claim 42, wherein the program instructions are further computer-executable to implement:

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a process unregistering interest in a first event of the service; and

the event message gate unsubscribing to the first event with the service subsequent to said unregistering;

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wherein the service is further configured to not send messages including data representation language representations of the first event to event message endpoints that are unsubscribed to the first event.

- 5    45.    The carrier medium as recited in claim 37, wherein the program instructions are further computer-executable to implement receiving the data representation language schema of the service in a service advertisement of the service.
- 10    46.    The carrier medium as recited in claim 36, wherein the one or more processes are executing within the client platform.
47.    The carrier medium as recited in claim 36, wherein the event is a Java event.
- 15    48.    The carrier medium as recited in claim 36, wherein said data representation language is eXtensible Markup Language (XML).